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## ABSTRACT

In December 1995, the Centre for the Economics of Education and Training (CEET) of Monash University in Victoria, Australia, conducted a 2-day conference on the economic impact of vocational education and training (VET). The following topics were among those discussed in the conference papers: the major changes that have been occurring in the size, structure, and objectives of education in Australia; the international context for VET (as perceived by an expert from North America, Professor Grubb, and an expert from Europe, Dr. Bertrand); structural change in Australian industry and its implications for VET; the lack of a national approach to VET in Australia; the structure, size, composition, and balance of the VET system in Australia following the training market reforms of the Keating government; effects of different forms of postschool education on the earnings of full-time employees; recent and continuing research on VET in which the CEET is involved; the need for and a framework for an international, global perspective on work and training; skills required by small high-tech exporters; VET at the enterprise level; current issues in VET in the United States at the secondary and postsecondary levels; competency-based training in Australia; and the link between VET and industrial relations. (MN)

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EDUCATION AND TRAINING

Chris Selby Smith and Fran Ferrier  
October 1996

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**MONASH UNIVERSITY - ACER**

**CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING**

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## THE ECONOMIC IMPACT OF VOCATIONAL EDUCATION AND TRAINING

A Conference on the economic impact of vocational education and training was held at the Edmund Barton Centre in Moorabbin on 7 and 8 December 1995. It was organised by the Centre for the Economics of Education and Training which is a collaborative venture of Monash University and the Australian Council for Educational Research (ACER).

The Centre for the Economics of Education and Training (CEET) was established in 1992. During 1994 the Centre was selected by the Research Advisory Council of the Australian National Training Authority as a VET Research Centre, focusing on the economic impact of VET. In addition to conducting research funded by ANTA's Research Advisory Council, the Centre is involved in a range of research projects funded by other government and non-government bodies, including the Australian Research Council; the Department of Employment, Education, Training and Youth Affairs; and the Organisation for Economic Cooperation and Development.

CEET's research involves both macro and micro studies of VET and the economy. Primarily it focuses on the changing nature of the Australian economy, and the role and contribution of VET to economic and social development. Much of the research is fundamental and concerned with improving the information and knowledge base for policy development and implementation. Research recently undertaken by CEET covers a broad range of topics including: the impact of globalisation on the occupational structure; development of a model for analysing student flows and completions as part of a study of labour market supply and demand; supply and demand projections in the professions and skilled occupations; the size and distribution of VET provision and associated economic outcomes; linkages between enterprise agreements and the provision of training; pricing options for TAFE courses; the dimensions of education and training in Australia; a review of statistical data for VET research; economic investment in and returns on VET; a review of policy and research literature on the training market and associated policy initiatives; and the impact of training market reforms on public and private training provision.

Through the sponsorship of visits by international VET experts and creation of links with overseas VET research centres, CEET aims to expand and enrich VET research and the relevant policy cultures in Australia and to lay the foundations for further cross-fertilisation of ideas and knowledge via cross-national research projects. CEET has established productive links with international researchers and centres for VET research in the USA, Europe and Asia. Phillip McKenzie from ACER, one of the co-Directors of CEET, is on secondment to the OECD in Paris for 1996 and 1997. In 1995, CEET organised visits to Australia by Professor Norton Grubb of the National Centre for Research in Vocational Education in the United States and Dr Olivier Bertrand, consultant to the OECD. Overseas researchers to visit CEET in the next year and whose work will be made widely available to researchers and other stakeholders in the national VET system include Professor Russell Rumberger of the University of California at Santa Barbara, and Dr Joachim Reuling of the German Federal Institute for Vocational Training in Berlin.

CEET has placed high priority on co-operative activities. The Centre has formed partnerships on a range of projects in addition to collaborating in the development of research submissions for ANTARAC and other bodies with researchers elsewhere, such as in TAFE Institutes and State Training Authorities. For example, CEET is collaborating with the National Key Centre for Industrial Relations at Monash University on an evaluation of small business and enterprise Australian Vocational Training Scheme projects for DEETYA. CEET staff are currently involved in a national evaluation of 'user choice' pilot projects across Australia for ANTA. Close links have been established with the University of Melbourne, where Professor Maglen took up the first Chair in vocational education and training in late 1995, and joint research and development activities are developing. A study of the impact of VET research on policy and practice is to be undertaken with the Research

Centre for Vocational Education and Training (RCVET) at the University of Technology, Sydney. An ARC-funded study of supply and demand across a wide range of occupations and qualifications is being undertaken jointly with the Centre of Policy Studies and the Centre for Population and Urban Research at Monash University. Workshops across Australia on the use of statistical data in VET research are being organised with the National Training Markets Research Centre in Adelaide.

Since its inception CEET has sought to promote ongoing interaction between researchers, policy makers and practitioners; to disseminate the research work of the Centre; and to stimulate and promote research and research training in the economics of VET. In addition to participating in the Conference reported here, Professor Grubb visited Brisbane and Sydney, while Dr Bertrand visited Adelaide and Canberra for discussions with a range of VET stakeholders (both participated in similar discussions in Melbourne). Members of the Centre seek to target particular groups of stakeholders, to discern their priorities for research, and to communicate the nature of the Centre's research program and its results. This is assisted by CEET's research partnerships, contacts made through CEET membership of VET committees and boards, through the Centre's own VET advisory committee, and through the frequent interactions arising from the research projects (e.g. consultancies for the OECD and the user choice study for ANTA). CEET staff have organised and participated in a diverse range of research dissemination activities: the Conference reported here, for example, was attended by a hundred participants from around Australia.<sup>1</sup>

The Conference papers which are the subject of this book are primarily concerned with the economic impact of vocational education and training. The Opening Address was delivered by Professor Peter Darvall, the Deputy Vice-Chancellor for Research at Monash, in which he noted the major changes which have been occurring in the size, structure and objectives of education in Australia, the importance of carefully examining the links between economics and education, and the (then) Prime Minister's view that vocational education and training are an important part of Australia's social, industrial and economic future.

Two papers setting the international context for VET developments in Australia were then presented by overseas experts, one from North America and one from Europe, invited by the Centre. Dr Bertrand's paper highlighted the main trends which have affected VET systems in European countries during the last two decades. While the paper could not fully account for the wide diversity of situations in Europe it assists comparisons with recent developments in other countries, particularly in Australia and the United States, which were discussed in other papers at the Conference. Considering VET developments in Australia against the background of those in Europe Dr Bertrand raises three sets of questions. The first set concerns the relationship between developments in VET and the labour market. The second set of questions relates to the new emphasis on national standards ("which may be seen from two points of view: the issue of centralisation compared to decentralisation; and the problems raised by the competency-based approach"). The third set of questions concerns the economic and financial aspects of training, where Dr Bertrand suggests that compared to the continental European countries, Australia seems to put more emphasis on an increased training effort by enterprises (which "implies a serious change in their attitudes"). In concluding Dr Bertrand notes the temptation to transfer pieces of a foreign experience to a different national culture. While accepting that "one should be careful not to interpret differences as a kind of permanent and fixed feature which would be for ever attached to a people" he takes the position that the issues he raises "should rather be approached in terms of the result of history and of a set of institutional arrangements".

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<sup>1</sup> People who wish to receive the CEET Newsletter or to seek further information on CEET research activities should contact Mrs Val Newson on Tel: (03) 9905 9157, Fax: (03) 9905 9184 and email [val.newson@education.monash.edu.au](mailto:val.newson@education.monash.edu.au).

Professor Grubb notes the emerging consensus in the United States that American firms provide too little training to their workers, at least in comparison with their major competitors in Europe and Japan. He examines a number of possible explanations for this situation. Professor Grubb accepts that "by examining other countries' education and training systems, it is possible to see what the important elements of such a system might be, and which elements are the subject of reforms that are being discussed in different areas". But a deep pessimism underlies his analysis and a profound questioning of whether the necessary changes can really be agreed and implemented. He takes the view that "the American political and economic systems, with their preferences for limited intervention, lax regulation, and market-based solutions, make intervention and coordinated policy difficult, and so some potential reforms and possible borrowings from other countries .... are difficult to imagine being implemented in the United States". His conclusion, based on extensive research and careful examination of a wide range of evidence, is strikingly at odds with the optimistic "can-do" approach sometimes associated with American attitudes. "In the end, the motivation of economic decline may not be enough" to cause the changes in VET which he advocates actually taking place.

The next session of the Conference heard papers from Professor Henry Ergas and Professor Ken Wiltshire. Professor Ergas, formerly of the OECD and Monash University, currently at Harvard University and the Australian Trade Practices Commission, spoke about structural change in Australian industry and the implications for vocational education and training. In his 1994 study of Australian manufacturing firms with Mark Wright he had found that intensified competition, whether through expanded international exposure or otherwise, tended to force managers to tackle inherited inefficiencies. The actions managers take can include greater emphasis on training, as well as on other factors such as research and development; product quality and customer satisfaction; and the development of more productive co-operative cultures within enterprises. In his present study of some four thousand firms he found a strong relationship at the level of the individual enterprise between research and development, overall learning and specific training. He noted that these relationships appear to be particularly strong in medium-sized firms. He also suggested that a wider distribution of skills across the population (holding the aggregate quantum of skills constant) appears to be associated with greater learning and more rapid growth in the total stock of human capital.

Ken Wiltshire, Professor of Public Administration at the University of Queensland, gave a wide-ranging and stimulating presentation. He argued that while there is currently a "golden age" for vocational education and training in Australia we do not really have a national approach to VET, "we have instead a loose confederation of interests whose collective will is still not producing overall leadership and direction for the sector". In his view a national approach is desirable and it "must maintain the three fundamental factors which have underpinned the success of the sector to date: the nation's economic needs; balancing the role of the system in catering for the educational needs of the individual, the society and the economy; and maintaining equity of access". Wiltshire suggests that "perhaps the most disturbing element of the present system is our low level of understanding of the sector itself". In discussing what needs to be done he focuses on four elements: research; curriculum and assessment; governance and commercialisation; and funding. In the final section of the paper Wiltshire outlines his preferred national approach, a cooperative middle way, "reflecting the realities of constitutional powers, fiscal arrangements, and current location of expertise".

The three subsequent papers were presented by members of CEET and reflect research on VET recently undertaken in Australia: Associate Professor Gerald Burke discussed the size and structure of VET in Australia; Mr Damon Anderson presented information on private providers and the training market and discussed their implications; and Dr Phillip McKenzie and Mr Michael Long from ACER considered the implications of vocational education and training for earnings, drawing on the 1993 Australian Bureau of Statistics *Survey of Training and Education*.



The paper by Gerald Burke concentrates firstly, on students and persons in training, and secondly, on expenditure. If we do not know what is occurring in VET then it is difficult to judge how well VET is responding to the changing demands of the economy, how efficient or effective it is, or how equitably resources are allocated. Burke's paper is typically careful and thorough: it shows that the available data sources "are not adequate to give more than a rough understanding of some major aspects of VET". Burke draws on a range of sources, including earlier studies undertaken in CEET. He also notes that there are in train many developments which are intended to make the VET data collections more comprehensive and coherent. Nevertheless he concludes that "data is scant in a number of areas and improvement in data is a major concern for government authorities".

Damon Anderson's paper examines the changes which have occurred in the structure, size, composition and balance of the VET system in Australia following the training market reforms of the Keating Government, with particular attention being given to private providers. Anderson argues that "by reconstructing the regulatory and financial basis of the VET system, the training market reforms have created the conditions for private sector growth and are facilitating a rapid transition from a peripheral to a parallel private training market within the context of a unified national VET system". Anderson concludes that the training market reforms "are fundamentally transforming the structure, size, composition and balance of the national VET system in Australia", not least by largely standardising the legal, regulatory and financial conditions under which public and private providers operate. He argues that "the former dual sector structure comprising a mass public TAFE sector and a peripheral private sector has been replaced by a more complex trisectoral structure comprising a regulated public sector, a partially regulated private sector and an unregulated private sector". In his view the only major factors constraining the full-blown emergence of a parallel private training sector "are financial: continuing direct government subsidisation of recurrent program provision and infrastructure (staff, capital and equipment) in the public TAFE sector".

The paper by Phillip McKenzie and Michael Long is based on analysis of data from the 1993 *Survey of Training and Education*, which was undertaken by the Australian Bureau of Statistics. McKenzie and Long use the ABS data to examine the influence of different forms of post-school education on the earnings of full-time employees. Noting that, compared to the field of higher education in Australia, there has been only limited work on the economic benefits of participation in VET (and in TAFE in particular) they argue that resolution of the question as to whether vocational education has a positive impact on the earnings of employees "is important for policy development in the VET sector, and for helping individuals and enterprises to make informed decisions about education and training programs". They note that, in addition to the usual problems of conceptualising and measuring the benefits and costs of education, there are particular difficulties in conducting such analyses in VET, including "the limited availability of data on VET participants, the wide age range of VET students, and the diversity of VET programs". Their analyses indicate that, holding other factors equal, completion of post-school qualifications has a positive impact on earnings. They found that the earnings differentials were highest for those who achieved degrees, associate diplomas, skilled vocational qualifications (for females) and basic vocational qualifications (for males). McKenzie and Long conclude that their results "provide broad support for efforts to lift education participation rates in Australia".

The final session of the first day of the Conference included two papers, the first by Professor Leo Maglen (of Melbourne University and CEET) and Dr Chandra Shah from CEET, the second by Dr Richard Curtain, a consultant to CEET. Both papers refer to recent and continuing research on vocational education and training in which CEET is involved; and adopt an international, global perspective on work and training. The paper by Maglen and Shah is concerned with the globalisation process, and changes in the Australian workforce between 1986 and 1991 – and with the implications this may have for education and training in Australia. Their framework is derived from the classification of jobs suggested by Robert Reich in his 1991 book *The Work of Nations*, in which he considered the future of work in a rapidly changing global environment. The paper by Maglen and

Shah is a report of work in progress and, although the full implications of their study are not yet available, the initial picture is somewhat gloomy. They show that, over the period 1986 to 1991, "workers with trade qualifications, undergraduate diplomas (especially for males, less so for females) and 'other' post-school qualifications typically competed poorly in all broad occupational categories. Encouragingly, however, they did manage to expand their employment amongst symbolic analysts". In their next report on the project Maglen and Shah intend to include further statistical analysis of the relative performance of VET qualified workers, by workforce experience, and to discuss the directions in which this type of analysis point VET policy makers, curriculum designers and practitioners.

Dr Curtain's paper is concerned with skills required by "small high tech exporters" and is drawn from a larger study in which he used case study methodology to investigate and report on the skill formation methods used in small to medium sized, leading-edge manufacturing firms. His research relates to the important debate about "the appropriate ways for public policy to assist small and medium sized enterprises to lift their export performance". Dr Curtain is particularly concerned with the problems faced by such enterprises, which can grow rapidly in employment, sales and exports, in moving "from an early establishment phase to consolidation for further growth". Drawing on eight case studies he found that, in most cases, the enterprises had failed to make a successful transition from "an *ad hoc*, craft mode of product development to an organisational structure that is capable of further expansion and growth". This is a worrying conclusion and Dr Curtain argues that "one aspect of the failure to implement new systems is the general absence of sophisticated human resource policies", despite the importance attached by these enterprises to "the role of research and development and their reliance on highly qualified knowledge workers". However, Curtain argues that, on the other hand, there is some evidence that such firms are responding to the difficulties they face by participating in learning networks, which "offer considerable potential for creating the level of cooperation small firms need to replicate the success of high tech startups in North America and Europe".

The first session on the second day of the conference focussed on training at the enterprise level. It included four papers, the first by Professor Grubb, which surveys a wide range of North American developments and provides valuable background information. The second paper, by Mr Noel Miller from the Ford Motor Company, outlines the extent of this company's education and training activities and the importance attached to them by senior management. The third paper, by Peter Ewer and David Ablett, gives a trade union perspective on VET reform in Australia and discusses concerns with competency-based training. The final paper in this session, by Chris and Joy Selby Smith, relates to the role of training in the introduction of a major organisational innovation (the restructuring of office-based work in the Australian Public Service).

Professor Grubb's paper is a wide-ranging discussion of current issues in vocational education and training in the United States, at the secondary level and at the post-secondary level, with particular attention to the sub-baccalaureate labour market and arrangements for short-term training. His paper is a striking illustration of the mutual benefits of appropriate international exchange. He notes the "renewed emphasis on using schools and colleges as mechanisms of economic growth and competitiveness – that is, on the vocational aspects of schooling in a general sense" in the United States. However, he argues that there has been much less consensus on what needs to be done and "many fewer reforms that have affected high schools, colleges and job training programs". He points out that, in many ways, "the current debate is a recapitulation of one around the turn of the century" in the United States: the issues then were also of how schools could assist economic growth and of "learning to earn". Grubb argues that one of the puzzles is "the disjunction between a near-consensus on need to change ..... and the limited amount of reform"; and concludes that when *national* problems arise the ability of the *federal government* to shape education "is quite limited" (and has recently become even weaker). In terms of learning from VET experience abroad he reaches the rather pessimistic conclusion that borrowings from other countries often take specific practices out of context, "changing practice on the



periphery of the education system, but without reforming the other institutions necessary to support real reforms".

Professor Grubb argues that there is a "central dilemma" in seeking to move towards reform of a complex education and training system while operating "within a political and economic atmosphere committed to individualism and *laissez faire*". His conclusion is that the separation of *training* from *education* has been counterproductive: "the real economic rewards are to be found in the educational system, not in job training". He accepts that "the glimmerings of a real system have now emerged", but concludes that the 'system', if it can be called that without fundamental inaccuracy, "is disconnected, fragmented and – particularly for those individuals who gain access through short-term job training and vocational educational programs – not especially effective". Grubb also concludes that more attention has been given to enrolments than to outcomes; and that the 'system' places virtually the entire burden on often ill-informed and under-resourced *students* to find their way among a variety of programs (with results which he argues "are probably socially inefficient"). In his view there is every reason to be concerned about the progression from school to work in such an unregulated market, since "it is easy for students to make mistakes, to prepare themselves for jobs that do not exist or are short-lived, to fail to gain competencies that are necessary for long-run mobility – or simply to be unable to decide what they most want to do, and therefore to mill around aimlessly without making much progress". The paper combines refreshing breadth with an immense grasp of detail, a passion for equity with a strong commitment to efficiency in VET.

Given the significant roles of unions and employers in vocational education and training, CEET was pleased that Noel Miller from the Ford Motor Company and David Ablett from the Amalgamated Manufacturing Workers' Union with Peter Ewer from the Union Research Centre on Organisation and Training were able to participate. Noel noted the importance attached to education and training at Ford, the extent and range of their education and training programs and the contribution made to the development of a learning culture within the organisation. He outlined some of Ford's training programs, which are "designed to support the business imperatives of the company". Under Ford's private provider status the company is registered, through the Victorian Office of Training and Further Education, to develop and deliver modules in a range of accredited courses relevant to the company's activities. Ford views the training programs it has developed as contributing significantly to the successful establishment of a range of partnerships with other accredited education and training providers; while the achievement of private provider status has helped Ford to consolidate much of what it had previously achieved. Senior management at Ford see the development of effective education and training programs "as being absolutely essential if we are to achieve our goals of continuous improvement and Total Quality Excellence". Ford also believes that the education and training model it has developed in conjunction with its education and industry partners, "is helping the company's employees to achieve their true potential". In implementing the programs, it is of interest that Ford has decided to utilise secondary and primary teachers, who are hired annually under the Victorian Government's teacher release to industry program. Mr Miller argued that this program "has proven to be an outstanding success for both parties".

In the paper by Peter Ewer and David Ablett a sceptical approach is taken to the actual practice of competency-based training in Australia. The authors write from a trade union perspective and their comments focus as much on the politics and equity aspects of competency-based training (CBT) as on its economics. They argue that "training reform was expected to carry far too much weight in economic and political terms", and that training reform tended to become "industry policy by other means". They are concerned that CBT has, in certain cases, been reduced to a technique of control (although they now see this as "an outcome embedded in its very design") and that a desirable feature of the apprenticeship system (the process of socialisation into a craft or calling) has been "one of the unfortunate casualties in the tidal wave of CBT". They are critical of competency standards developed through the ITAB structure as an inherently top-down, technocratic process ("through which the

industry parties, and contract researchers, specify what they think workers *should* know"). They argue that the competency process is having only a marginal impact on industry practice, partly because of its complexity, is failing to address adequately the training needs of women workers and in some cases the standards appear to be attempting to "define acceptable personal aptitude and even appearance, rather than skill"; and that "the industrial infrastructure required to disseminate the unified model of training reform was marginalised by enterprise bargaining before it had time to become operational". These are strong criticisms, especially when coming from authors who are genuinely committed to the interests of labour and closely associated with a major union which has had a significant influence on the training reform agenda.

The final paper in this session of the Conference, concerned with VET at the enterprise level, was a study of the role of training in the implementation of a major organisational innovation, the restructuring of office-based work in the Australian Public Service between 1987 and 1990. This was the largest restructuring exercise ever undertaken in the APS and affected nearly 115,000 staff i.e. some two-thirds of all permanent staff. Training was an important element of the restructuring exercise for management, unions and individual staff. The study on which the paper by Chris and Joy Selby Smith is based was a means of identifying, in a particular context, issues concerning the linkages between training, competitiveness and the quality of working life which may be applicable more generally. It also brings into focus approaches to learning and training which are developed in the innovation literature, but which are often not taken into account in VET fora. The study concluded that training, defined as a formal process incorporating instruction, appeared to have made a significant contribution to effective implementation of the new arrangements, but that forms of learning other than training were also involved (emphasising that training is a sub-set of learning in the workplace). However, the relative importance of training varied among the different objectives of the restructuring exercise, training's contribution could be indirect as well as direct, and training appeared to have a clear time-cycle. Furthermore, the study underlined that changes in work organisation, technology, corporate management arrangements and the development of skills and training processes are all intimately connected, so that changes in one element are not independent of changes in the others: "analyses of the effects of training will be incomplete if they do not take these interrelationships into account". It is also of interest that the expanded commitment to training by APS management and individual agencies was important in securing cooperation from major stakeholders (such as relevant unions and individual staff), which facilitated the introduction of other efficiency-enhancing changes which were wider than, perhaps even apparently quite unrelated to, the implementation of this particular organisational innovation for office-based work.

The penultimate session of the Conference considered aspects of the important connection between vocational education and training in Australia and industrial relations. This session contained three papers, the first by Mr John Vines, the innovative Executive Director of the Association of Professional Engineers, Scientists and Managers, Australia (and a member of the Karpin Task Force on management education in Australia); the second by Ms Jane Carnegie, formerly with the Australian Council of Trade Unions and now with ANTA; and the third by Associate Professor Julian Teicher, an Associate of CEET and Deputy Director of the National Key Centre in Industrial Relations at Monash University, with Ms Aija Grauze from CEET.

John Vines noted the growing awareness in Australia of the importance of continuing professional development. Drawing on his union experience and his membership of the Industry Task Force chaired by David Karpin he argued that, "just as professional level employees are embracing the concepts of continuous learning, so too will the more vocationally trained members of the workforce and particularly those in or aspiring to reach frontline manager positions". He argued that a basic feature of the most effective management development practices is "them being primarily enterprise focused", that they need to have a more "customer driven rather than a supply driven approach". He illustrated his comments by reference to the remarkably successful MBA (Technology Management) program

developed by APESMA and delivered through Deakin University; it began in 1988 and now has a 23% market share of all MBA students throughout Australia. Research for the Karpin Task Force found that approximately half of the frontline managers in Australia had no formal training for the roles and responsibilities which they undertake. Against this background the Task Force recommended a major national initiative for frontline managers. APESMA, which has become a registered provider within the VET system, has developed and will offer with the Australian Manufacturing Workers' Union on a face-to-face in-house basis in enterprises, and in addition on a distance learning basis, a certificate program for individuals who wish to acquire skills relevant to the frontline manager role. John Vines suggested that the involvement of the AMWU in the delivery of a national education and training program "reflects a likely development for other unions", given the need to broaden their offerings to meet the needs of their members. Such developments could have a significant impact on the VET system, not least because of their perspectives and the very large potential student numbers for programs which industry based unions may offer; on the opportunities for workers to participate in training; and on the future competitiveness of Australian enterprises.

In her paper, entitled "Industrial Relations and Vocational Education and Training in Australia", Jane Carnegie argues that historically there "has been a strong interconnection between industrial relations and vocational education and training in Australia, manifested by both wage fixation processes and the apprenticeship system"; and that this interface is as important today as it has been in the past. She sets out to investigate whether, over the last decade or so, there has been "a substantial change in the structure of the relationship precipitated by significant reforms in both vocational education and industrial relations as a response to economic restructuring". Her conclusion is quite unambiguous: "at both a systemic and specific industry and enterprise level there has been a major change in the way that training and industrial relations intersect, driven by the reform processes of each system, the economic imperatives driving those reform processes and the approach to managing the reforms through the Labour years of office". For example, she notes that data collected recently by the Federal Department of Industrial Relations show the significance of training and training related structures to enterprise bargaining, the increasing importance of specific training provisions which relate to the Training Reform Agenda and the direct linkages between training, productivity increases and wages outcomes. Given the reforms proposed by the new Howard Government she argues that the parameters and the outcomes of the interrelationship may change again, although precisely how is not yet clear.

The final paper in this session of the Conference was given by Associate Professor Julian Teicher and Ms Aija Grauze and is concerned with enterprise bargaining, industrial relations and recent training reforms in Australia. Since relatively little is known about the nature and extent of the training arrangements which have been implemented within the framework of enterprise bargaining the authors explore the extent of training provisions in enterprise bargaining agreements (and changes in such provisions since enterprise bargaining began); present a demographic profile of those persons who are covered by agreements which include training provisions; and discuss the quality of training provisions which are included in the agreements they examined (and whether these differ across industries). Their research found that many workplace changes required training for their achievement and that this was sometimes reflected in enterprise agreements. More often, however, they found that agreements included a training provision (e.g. a commitment to training or to the establishment of a training program, consultation on training or training leave). They comment that "by and large, these commitments appear to have rested on the assumption that training will enhance enterprise productivity, though the data are equivocal on whether this expectation generally has been met". Teicher and Grauze suggest that the absence of detailed provisions mapping out the parameters and implications of a training program "cast doubt on whether the parties to the agreements seriously intended implementing training programs". They argued that, on one view, inclusion of training provisions and ancillary reference to career paths may be a concession to union negotiators. Alternatively, managers seeking to justify pay rises granted in enterprise negotiations "may have been able to report that training programs were being implemented to enhance productivity or improve quality". They expressed concern at

"consistent indications that training is not central to the enterprise bargaining process"; and further concern at "evidence that there is a considerable gap between the inclusion of training provisions and the conduct of training and enhancement of productivity". They conclude that further research at the enterprise level is required "to identify the extent to which training provisions are implemented in the workplace and how this differs between organisations that have specified training arrangements in their enterprise agreements from those that have not".

The final session of the Conference considered a range of issues considered earlier in the program or relevant to its theme. Professor Barry McGaw, Director of the Australian Council for Educational Research and a member of ANTA's Research Advisory Council, presented an overview of major issues and suggested various directions in which a research agenda for the economics of VET could be developed. This was followed by a panel discussion involving Professor Grubb, Dr Bertrand, Professor McGaw and Associate Professor Burke and questions and comments from the audience. Against this background Professor McGaw wrote the paper, "Developing a Future Research Program", which is included as the final chapter in this book. He argues that there are three considerations when establishing a research agenda: the broader context within which the research questions are framed and priorities identified; the importance of constructing the research agenda "in a way that makes connections between different elements"; and the need to give careful thought, at the beginning, "to ways of maximising the impact of the research program". He strongly supports a strategy whereby "the lines of communication between policy makers, practitioners and researchers" are kept open so as to "facilitate a process of mutual education about each other's concerns". In considering the possible content of a research agenda in the economics of VET Professor McGaw argues that attention to at least five main issues is required: the benefits of VET; the role of VET in change; the cost-effectiveness of different forms of VET; the content of VET; and the beneficiaries of VET at the level of individuals, enterprises and society (using both cross-sectional and longitudinal data; and addressing both equity and efficiency objectives). He recognises, of course, that "it is unlikely that all, or even a substantial part, of such an agenda could be tackled in the near future with the resources currently available"; and suggests three possible responses. The first response is to structure and link the items in the research agenda so that "scarce research resources can serve multiple purposes". Another response is to build collaborative relationships with other groups of researchers, "especially those from other disciplines". The third response, which Professor McGaw suggests is perhaps the most important, is to "ensure that the research that is done has maximum impact". He advances a number of helpful suggestions as to how these three responses might be pursued effectively. It is perhaps of interest that ANTA's Research Advisory Council subsequently advertised nationally a research project to investigate the relationship between VET research and its impact on policy, practice and performance; that the competition was won by CEET; and that the Centre, in cooperation with the ANTARAC Research Centre at the University of Technology, Sydney will be undertaking the project in 1996-97.



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